NOTE ON *GASTRODIA SESAMOIDES* (R. Br.)

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I noticed in the early part of November last year, and also about the same time in the present year, several plants of this leafless orchid growing at the roots of a blue-gum tree (*Eucalyptus globulus*, Labill.) in Mr. Lester's garden at Burwood. Although the gum-tree may be from ten to fifteen years old, no one ever noticed before November of last year any orchids growing at its roots, and yet it is highly probable that some of the bulbs of *G. sesamoides* accompanied the young tree at its introduction into the garden. One of the plants which I measured was over two feet in height, with a raceme of dull white flowers several inches long, and a fusiform fleshy root of more than six inches. R. Brown regarded this orchid as parasitical, and Baron Mueller expresses a similar opinion (see "System of Victorian Plants," Vol. I. p. 403), or at all events that it is "epirhizal, like *Epipogum Gmelini* in England." When I wrote last year to the late Mr. R. D. Fitzgerald, F.L.S., on the strange appearance of *G. sesamoides* in Burwood, he replied, "I have found that orchid at the Fox Gully near Lane Cove, the North Shore, Mittagong, and other places, but I do not think it is a common species anywhere. As *Eucalyptus globulus* is not one of our Eucalypts, I cannot understand how the orchid could have been transplanted from the bush and made its appearance in the garden. If the Eucalypt had been a wild gum-tree, the fact of this orchid being found in such a place would have gone to show that it is a parasite. I have never found any great proof that *Dipodium*, *Galeola*, and *Gastrodia* are parasitical, though supposed to be so." So far as the last is concerned, the tuberous roots do not appear parasitical, nor as deriving any nourishment from the trees at whose roots they grow,

nor do they seem to be in any way connected with another plant. From a careful examination of several plants, I found the roots striking down perpendicularly and perfectly independent of the gum-tree, although from their close proximity to the butt of the tree, it might be supposed that they were in some degree sustained by it. All that can be said on the subject is that the natural habitat of *G. sesamoides* is the roots of gum-trees, just as Mr. Fitzgerald's *Pterostylis Baptistii* delights in proximity to those of tea-tree (*Melaleuca*). *G. sesamoides* has nothing striking in its appearance, but the species is worthy of study from the fact that its flowers differ so much in structure from those of the orchids common near Sydney, the sepals and petals being united in a five-lobed tube, and the enclosed labellum remarkable for its undulate margin and raised lines confluent near the apex. The genus is common to Queensland, N. S. Wales, Victoria, Tasmania, New Zealand, and the Oriental Archipelago. *G. Cunninghami* (Hook.) is very nearly allied to *G. sesamoides*, and differs principally in the colour of its flowers, the size of its roots (which used to be eaten by the New Zealanders), and its frequent occurrence in deep-shaded woods. They are probably varieties of the same species.